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*STATEMENT OF GENERAL BACKGROUND, GOALS, AND  
METHODS OF TRANSMISSION LINE ARCHEOLOGICAL SURVEY*

*by*

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Prepared by the  
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## *INTRODUCTION*

This statement is designed to provide general information concerning the responsibilities and needs of the Institute in relation to cultural resource assessment of transmission line corridors. Potential impacts to cultural resources by transmission lines are discussed and a general plan of methods to recognize and evaluate such impacts is presented.

As a research institution within the University of South Carolina and as a state agency containing the Office of the State Archeologist, the Institute of Archeology and Anthropology has a double mission. First, it is committed to anthropological and archeological research concerning prehistoric and historic activities of human populations. This research is focused on, but not limited to, the state of South Carolina and the Southeast region, and is directed toward meeting the educational objectives of the University for the people of the state. Second, through the Office of the State Archeologist, the Institute is also committed to conservation and management of the prehistoric and historic archeological resources of the state of South Carolina. These two aspects of the Institute mission are interwoven and complementary.

The archeological conservation mandate of the Institute is derived from the state of South Carolina through various laws and agency regulations. This mandate is shared by other state agencies, most notably the State Department of Archives and History. The Institute, through the Office of the State Archeologist cooperates closely with these state agencies. The State Archeologist is also designated by several federal laws and agency regulations and guidelines as a focal point for federal conservation requirements within South Carolina. The State Archeologist is thus responsible, through several legal pathways, for inventorying the archeological

resources of the state, as well as developing and executing a plan for their conservation and management. Development and execution of such a plan, including nominations to the National Register of Historic Places, necessarily involves evaluations of significance. Significance is largely, but not entirely, dependent on the relation of the archeological resources to historical, anthropological, and archeological theory and knowledge. To properly evaluate archeological significance the State Archeologist must thus be aware of the demands of current theory on the resources. This need directly involves the research capabilities of the Institute and the University.

South Carolina has lagged behind other states in the Southeast in archeological research for many years and is, at the present time, greatly deficient in knowledge and understanding of its archeological resources. Systematic efforts by the state to remedy this situation were begun in 1963, resulting in the creation of the Institute in 1968. The Institute has, since that time, been actively involved in research within the state aimed at inventorying the archeological resources and at building an understanding of these resources through development of anthropological, historical, and archeological theory concerning the historic and prehistoric populations which created them. This research program has advanced our understanding tremendously in its short history, but, even so, entire areas (and cultural periods) of the state remain unexplored. The research commitment of the Institute, however, is directed toward resolving this deficiency, and continued progress is anticipated.

To further both its conservation and research goals the Institute makes available its staff and facilities for service to those people and organizations having needs concerning archeological resources of the state.

Such services include general advice as well as reconnaissance, survey, excavation, analysis, and curation of archeological resources. In most cases these services are not covered by State and University funding of the Institute and must be contracted for. As research results accumulate, and as staff and facilities improve, the capability of the Institute to provide such services increases, and the Institute looks forward to being able to develop and maintain soon a program adequate to keep up with emergency and long-range needs. The Institute feels a major responsibility to contractors for these services, and has a commitment to high quality work and timely preparation of reports with reasonable conclusions and recommendations.

#### *POTENTIAL IMPACTS OF TRANSMISSION LINE CONSTRUCTION*

Potential impacts of transmission line construction may be divided into two sets, direct impacts and indirect impacts. Direct impacts are those which have immediate effect on the integrity of archeological sites and include excavation for tower or pole construction as well as ground disturbance associated with vegetation clearing, movement of heavy equipment, and construction of access roads and laborer facilities.

Indirect impacts are effects which are not an immediate and direct result of construction action, but which would probably not occur without it. Indirect impacts occur because of the exposure of resources, either within or adjacent to the development, to such adverse effects as accelerated erosion, intensified agriculture, construction of private or commercial buildings, road-building, and increased vulnerability to vandalism.

Any judgement of impact must, of course, take into account not only the type and extent of the impacting activity, but the nature of the resources that may be affected. For example, the movement of heavy equipment over a transmission line corridor may not have significant effect upon deeply buried sites within the corridor. Actual impact would in that case be minimal or nonexistent. However, the same action may be completely destructive to sites occurring on or very near the ground surface and characterized by fragile patterning of artifact or feature distribution.

After taking into account both of these factors and thus establishing the extent of impact, the significance of the resources to be impacted must be assessed so that appropriate plans can be made to alleviate or mitigate the effects of impact. Large impact on a site of minor significance may not be as important as a smaller impact on a site of major significance. As discussed above, significance depends largely on the importance of the resources as data for anthropological, historical, and archeological theories. (This criterion may not be important in cases where a site is directly related to an event or person of great significance to national or local history.) To judge significance a sample sufficient for description (not just presence) of the site is necessary in most cases. This sampling requirement can usually be met in transmission line studies by intensive and systematic surface collecting and post-holing. It is anticipated that in most cases, given the generally limited nature of transmission line impact, such intensive collection and post-holing will also provide in and of itself appropriate mitigation.

A flowchart of the above-described process is presented as Figure 1.

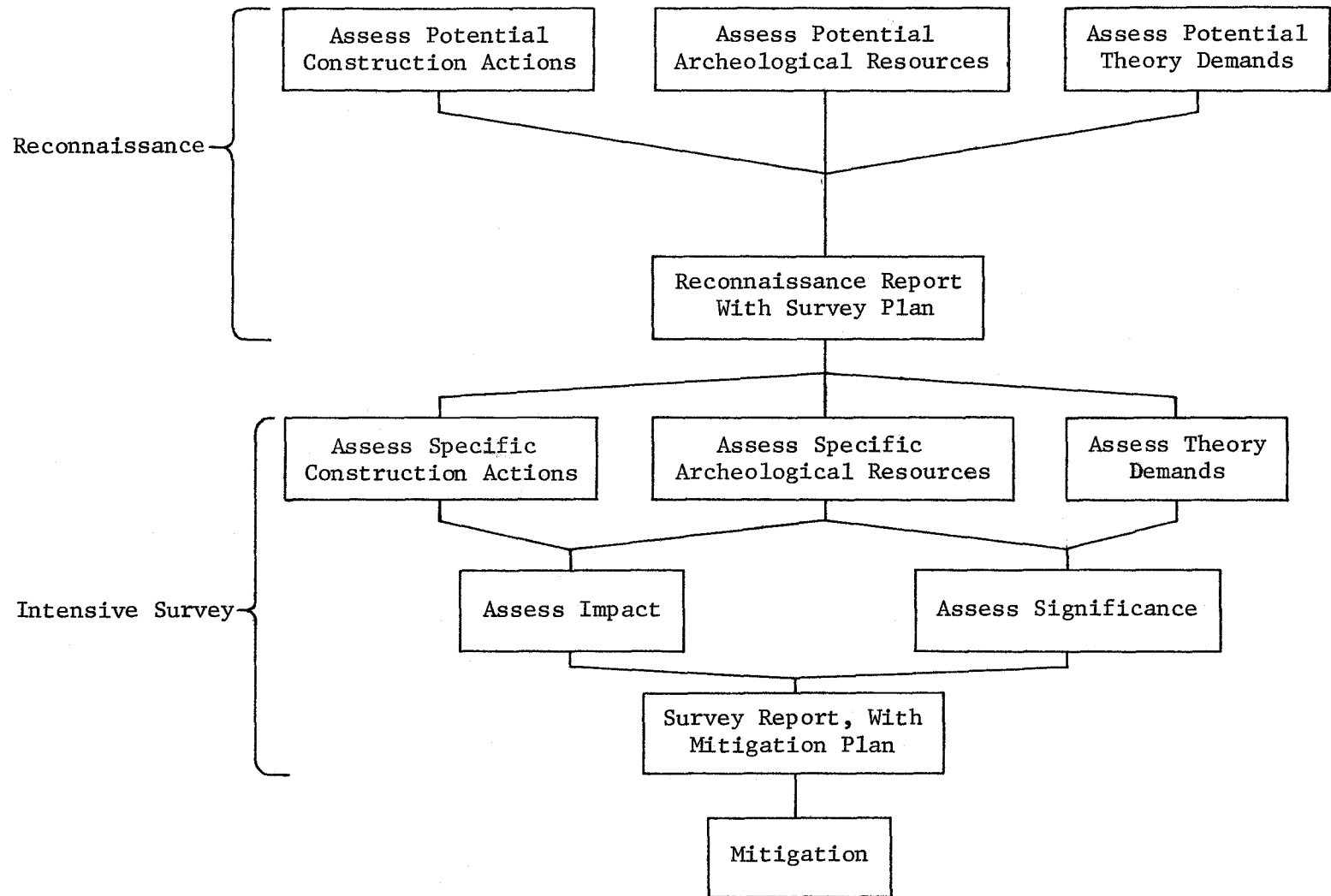


FIGURE 1. Flowchart of the Reconnaissance and Survey Process.



### *ARCHEOLOGICAL METHODOLOGY*

An archeological project directed toward assessment of cultural resources typically consists of three phases: (1) reconnaissance, (2) intensive survey, and (3) mitigation of impact. Each phase is accompanied by checking of records, contacting local historians, etc., preparation of a research design, and preparation of a final report. All phases operate under a prior general overview of knowledge and problems of the area and region.

Reconnaissance phase investigations are designed to assess the effect of alternative (construction) project designs on the archeological resource base. In addition to records checks and local contacts, reconnaissance normally involves small sample field checking sufficient to make informed recommendations concerning the intensive survey phase. Data generated would include an estimate of archeological potential, as well as information concerning ground cover and other physiographic and topographic features important to the design of an intensive survey. This information is important in aiding selection among alternate construction programs.

Intensive survey includes a comprehensive and systematic field examination which will result in a reliable (representative) description of the archeological and historic resources. A proposal for intensive survey should include a research design which would outline (1) the environmental, archeological, and historic context, (2) the purposes of research, and (3) the research strategy, schedule, and priority. A report of intensive survey will

include an evaluation of significance of archeological resources, a determination of impact to them, and a mitigation plan or proposal with cost estimates.

Mitigation of impact takes one (or a combination) of two forms: (1) preservation of the archeological resources, or (2) intensive study, often involving excavations. The nature and extent of impact must be evaluated in conjunction with the significance of the archeological resource to determine the selection of the most feasible mitigation plan, but preservation is usually preferred when possible. Impact by transmission line construction is generally minor, relative to other modern construction and development projects. It is anticipated that preservation will often be possible, and when not, small-scale excavations or intensive collecting programs will usually satisfy mitigation requirements. Mitigation proposals should also contain a research design analogous to survey designs. A final mitigation report should include a description of work done, materials recovered, and their analysis. Such a report should also provide a management plan useful to the sponsoring organization, as well as syntheses and results useful to the general scientific community.

Project urgency may cause disruptions of the above-outlined general plan. On projects very near to construction, reconnaissance may be omitted or included in the intensive survey phase. A general research design for these is outlined below. More detailed and specific methods and schedules will be developed as necessary, and general overviews, applicable archeological theory, and specific hypotheses tested will be presented in reports of the surveys.

Surveys of transmission line corridors having relatively short lengths will involve complete on-foot surface inspection and small shovel or post-hole excavation. On longer corridors, complete pedestrian survey may not be economically feasible, and a sampling procedure may be used. Such sampling procedures will be designed to provide useful and reliable predictions for the non-investigated areas and will usually involve prior partitioning of the area to be investigated into environmental as well as impact zones.

General procedure will involve checking areas of maximum observation potential most intensively and minimum observation potential least intensively. This potential is generally determined by the nature of ground cover. Thus, plowed fields will be most intensively studied, pasture or grassed areas next, and wooded areas last. Observation of the ground surface in wooded and grassed areas is limited; post-holing and shovel excavation will be utilized in a systematic manner to recover information on site presence in these areas. When a site has been located, intensive and systematic surface collection and/or post-holing will be employed to gather data necessary for evaluation of site significance. Normally, laboratory analysis of materials collected will follow field examinations; however, because of inclement weather, access problems, etc., such analysis may be intermixed with field survey. Analysis of materials collected, preparation of figures and photographic plates, and drafting of a report generally take about twice as long as the period of on-the-ground field work. The final report will include full descriptions of methods employed, materials recovered, as well as judgements of significance and a mitigation proposal.

It should be pointed out that little archeological research has in the past been directed toward understanding the potential of or problems involved in studying ribbon-like corridors of transmission lines. Methods efficient to both the archeologist and the power company have not yet been determined. We at the Institute are very interested in the development of such methods and look forward to obtaining much information in the next few months, not only about the archeological resources, but also about how best to approach their identification and study.